

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the Claims:

1 (Currently Amended): An anode electrode for a secondary battery having a cathode and an anode for releasing and receiving the same kind of metal ion therebetween, comprising:

an anode layer ~~including~~ formed from a single layer of an anode material, the anode material comprising boron-added carbon containing at least carbon and boron,

wherein the single layer forming the anode layer having has a thickness of 30 μm or less.

2 (Currently Amended): An anode electrode according to claim 1,

wherein the single layer forming the anode layer has a thickness between 1 μm inclusive and 30 μm inclusive.

3 (Currently Amended): An anode electrode according to claim 1,

wherein the boron-added carbon is boron-added amorphous carbon containing at least amorphous carbon and boron, or boron-added graphite containing at least graphite and boron.

4 (Currently Amended): An anode electrode for a secondary battery having a cathode and an anode for releasing and receiving the same kind of metal ion therebetween, comprising:

an anode layer ~~including~~ formed from a single layer of an anode material, the anode material comprising carbonaceous material containing at least carbon;

wherein the single layer forming the anode layer has a thickness less than 1 μm .

5 (Currently Amended): An anode electrode according to claim 4,

wherein the carbonaceous material ~~[[is]]~~ comprises amorphous carbon or graphite.

6 (Currently Amended): A lithium ion secondary battery, comprising:

an anode electrode ~~including an anode layer having boron-added carbon, the anode layer~~
~~having a thickness of 30 μ m or less according to claim 1;~~

a cathode electrode including a cathode layer; and

an electrolyte interposed between the cathode electrode and the anode electrode.

7 (Original): A lithium ion secondary battery according to claim 6,

wherein the lithium ion secondary battery has a structure including a plurality of bipolar electrodes serially stacked by interposing electrolyte therebetween, each bipolar electrode including a collector having one surface formed with the cathode layer and the other surface formed with the anode layer.

8 (Original): A lithium ion secondary battery according to claim 6,

wherein the cathode layer includes a cathode active material which is a lithium transition-metal composite oxide.

9 (Original): A lithium ion secondary battery according to claim 6,

wherein the electrolyte comprises polymer used in a gel form or solid form.

10 (Original): A lithium ion secondary battery according to claim 6,

wherein the lithium ion secondary battery is used in an assembled battery.

11 (Original): A lithium ion secondary battery according to claim 10,

wherein the assembled battery is used for a vehicle.

12 (Currently Amended): A lithium ion secondary battery, comprising:

an anode electrode ~~including an anode layer having carbonaceous material~~ according to claim 4;

a cathode electrode including a cathode layer; and

an electrolyte interposed between the cathode electrode and the anode electrode;

~~wherein the anode layer has a thickness less than 1 μm .~~

13 (Original): A lithium ion secondary battery according to claim 12,

wherein the lithium ion secondary battery has a structure including a plurality of bipolar electrodes serially stacked by interposing electrolyte therebetween, each bipolar electrode including a collector having one surface formed with the cathode layer and the other surface formed with the anode layer.

14 (Original): A lithium ion secondary battery according to claim 12,

wherein the cathode layer includes a cathode active material which is a lithium transition-metal composite oxide.

15 (Original): A lithium ion secondary battery according to claim 12,

wherein the electrolyte comprises polymer used in a gel form or solid form.

16 (Original): A lithium ion secondary battery according to claim 12,

wherein the lithium ion secondary battery is used in an assembled battery.

17 (Original): A lithium ion secondary battery according to claim 16,

wherein the assembled battery is used for a vehicle.

18 (New): An anode electrode according to claim 1,

wherein the anode material comprises at least one of oxide, sulfide and salt of other metal which forms an alloy with the metal to be obtained by reducing the metal ion.

19 (New): An anode electrode according to claim 4,

wherein the anode material comprises at least one of oxide, sulfide and salt of other metal which forms an alloy with the metal to be obtained by reducing the metal ion.

20 (New): An anode electrode according to claim 1,
wherein the anode material comprises a supporting salt for enhancing a conductivity of the metal ion, or a polymer electrolyte.

21 (New): An anode electrode according to claim 4,
wherein the anode material comprises any one of a conductive material for enhancing electron conductivity; a binder; a supporting salt for enhancing a conductivity of the metal ion; and a polymer electrolyte.

22 (New): An anode electrode according to claim 1,
wherein a content of boron within the boron-added carbon is within a range from 0.1 to 10% by weight.

23 (New): An anode electrode according to claim 1,
wherein the boron-added carbon is formed by baking a carbon material added with a boron compound.

24 (New): An anode electrode according to claim 1,
wherein the boron-added carbon is formed by carbonizing an organic material containing a boron compound.